



AEROSPACE STANDARD

AS8091™**REV. A**

Issued 1999-04
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Reaffirmed 2025-05

Superseding AS8091

(R) Aircraft Jacking Pads Adapters and Sockets,
Design and Installation of

RATIONALE

Full revision of the document. Addition of new jacking point adapter categories and revision of existing ones to include current commercial aircraft in service. Scope clarification, references update. Harmonization with ISO references. Adaptation to civil use aircraft. Update of AS33559 removing inconsistencies and adding generic jack socket dimensions to merge AS33559 into this document, making AS8091 the sole reference to be used.

AS8091A has been reaffirmed to comply with the SAE Five-Year Review policy.

NOTICE

The initial SAE publication of this document was taken directly from U.S. Military Standard MIL-STD-809B. This SAE Standard may retain the same part numbers established by the original military document.

Any requirements associated with Qualified Products Lists (QPL) may continue to be mandatory for DoD contracts. Requirements relating to QPLs have not been adopted by the SAE for this standard and are not part of this SAE document.

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1. SCOPE

1.1 Purpose

This SAE Aerospace Standard (AS) provides requirements for design and installation of aircraft jacking pad adapters and the mating jack socket interface to permit use of standard jacking equipment to be used in civil and military transport aircraft. The adapter defined herein shall be the key interface between the aircraft and the aircraft jack(s).

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AS4775 Aircraft Maintenance Jacks - General Requirements

2.1.2 ISO International Standards

In the U.S., available from American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

Abroad, available from International Organization for Standardization, ISO Central Secretariat, 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, Tel: +41 22 749 01 11, www.iso.org.

ISO 43 Aircraft - Jacking pads

ISO 1464 Aerospace - Tripod jacks - Clearance dimensions

2.1.3 CEN Publications

Available at <http://www.cen.eu>.

EN 12312-19 Aircraft ground support equipment - Specific requirements – Part 19: Aircraft jacks, axle jacks and hydraulic tail stanchions

2.1.4 U.S. Government Publications

Available from DLA Document Services, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: 215-697-6396, <http://quicksearch.dla.mil/>.

MIL-A-8863 Airplane Strength and Rigidity Ground Loads for Navy Procured Airplanes

MIL-HDBK-1568 Materials and Processes for Corrosion Prevention and Control in Aerospace Weapon Systems

MIL-HDBK-1812 Type Designation, Assignment and Method for Obtaining

MIL-STD-130 Identification Marking of U.S. Military Property

MIL-STD-889 Dissimilar Metals

MIL-STD-7179 Finishes, Coatings and Sealants for protection of Aerospace Weapons System

2.1.5 Other Publications

14 CFR, Code of Federal Regulations, Aeronautics and Space, Part 25, §25.519 Jacking and tie down provisions

EASA CS-25 Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes, §CS 25.519 Jacking and tie down provisions

2.2 Definitions

2.2.1 ADAPTER

The word Adapter as used herein is the male piece/part of the interface between the aircraft and the jack(s). The adapter can be mounted on the aircraft airframe, landing gear or jack. Sometimes is also referred to as a Jacking Pad Adapter.

The adapter shall be designed for a satisfactory fit and positive accommodation to bring or settle the aircraft and/or landing gear into a proper position on the mating socket. The adapter shall mate with the socket to transmit the load from the aircraft or landing gear to the jack.

NOTE: This specification's content and figures have been written assuming the aircraft/landing gear has the adapter and the jack incorporates the socket. However, aircraft interfaces sometimes use an adapter (male part) and sometimes a socket (female part) connected to the airframe. The aircraft jacks would then have the mating socket or adapter respectively. This specification shall be valid for both configurations

2.2.2 SOCKET

The word Socket as used herein is the female piece/part that is the interface between the adapter and the aircraft jack. The socket can be mounted on the aircraft airframe, landing gear or jack. Sometimes is also referred to as Jacking Pad Socket.

The socket shall be designed for a satisfactory fit and positive accommodation to bring or settle the aircraft and/or landing gear and jack into a proper position on the mating adapter. The socket shall mate with the adapter to transmit the load from the aircraft or landing gear to the jack.

2.2.3 TURN-AROUND TIME

As used in this standard, Turn-Around Time (TAT) is that time required to complete an action which initially requires the use of an adapter as designed and installed in accordance with this standard. The action will normally be a maintenance task such as a repair or replacement. The procuring activity shall define the Turn-Around Time(s) to be determined.

3. CLASSIFICATION

Each jacking pad adapter shall be classified by type and class.

3.1 Types

The design of the jacking pad adapter shall be determined as to type by the loads imposed as follows:

Type I - Primary flight structure (PFS) adapters for reactions of less than 10 000 pound-force (44,5 kN).

Type II - Primary flight structure (PFS) adapters for reactions of 10 000 pound-force (44,5 kN) to 112 000 pound-force (500 kN).

Type III - Axle adapters for reactions of less than 10 000 pound-force (44,5 kN).